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THE HANFORD TECHNICAL LIBRARY: Evolution in Electronic Information Services By Nick G. Carter and Joseph R. Judy

Introduction

The Hanford Technical Library (HTL) serves the U.S. Department of Energy's (DOE) Hanford Site in the desert of southeastern Washington. The Library has been in existence since the early 1950s and is operated by the Pacific Northwest Laboratory, the research arm of Hanford and a multi-program national laboratory, as a service to DOE and all contractor personnel. This paper describes the Hanford Technical Library, its services, and the electronic information initiatives that have been underway during the past several years. All of these current activities are part of a long-range goal to provide fast, comprehensive desktop information services to all contractor staff across the entire 1,456 square kilometer (560 square mile) site.

The Pacific Northwest Laboratory is operated for the U.S. Department of Energy by Battelle Memorial Institute under Contract DE-AC06-76RLO 1830.

Background About Hanford and HTL

Hanford was founded in 1943 when the federal government developed the site and built the B Plant to produce plutonium for nuclear weapons. The mission has changed in recent years from plutonium production to environmental cleanup. Current needs are to store the

existing radioactive wastes safely and for research and development into new, efficient methods to clean up all the old weapons production sites.

Of the over 14,000 employees on the Site, about 3,500 (primarily scientists and engineers) are core users of library services. The library is staffed by 8 professional and 14 technical/clerical personnel.

The Library, which opened in 1952, focuses on information resources in energy technology, waste management, environmental sciences, chemistry, life sciences, and engineering. Onsite holdings include 40,000 monographs, 100,000 bound journal volumes, 800,000 technical reports, and subscriptions to over 1,200 journal titles. The collection is housed in a main library and two branches, Life Sciences and Legal. The HTL is a member of the Western Library Network (WLN) and maintains all of its cataloged holdings on that system. Online database services include those from DIALOG Information Services, STN, DOE ITIS, DOD DROLS, Lexis/Nexis, WLN, RLIN, OCLC EPIC and NewsNet.

The base budget for HTL of \$1,650,000 covers the basic acquisition costs for the collection, general operations, management costs, and basic staff costs. This cost is shared among the principal contractors. In addition, there

are special charges for photocopying, document ordering, interlibrary loans, and literature searching. These are charged back to the user's project accounts and will total nearly a half-million dollars this year.

The Library processes orders for books, reports, journal subscriptions, and other materials for the entire site as well as for the library collection. This amounts to over 40,000 book and report orders a-long with over 5,000 journal subscriptions processed annually.

Current Electronic Services

After 40 years of service, the biggest challenge has always been to provide library and information services to a large and diverse clientele scattered over almost 1,500 square kilometers. As any user survey will show, use of any library facility drops off rapidly as the user's distance from it increases.

The primary key in being able to provide services electronically has been the site-wide Local Area Network (LAN) that currently connects over 9,000 users. For the past several years the Library has used this PC-based, microcomputer LAN to provide site-wide access to its card catalog, monthly accessions lists, and journal holdings. An electronic document request form is also included to facilitate document orders. These electronic library services have become increasingly popular and we have seen a steady increase in number of staff using the system.

During the past year, the services have expanded to include 8 CD-ROM databases as well as disk-based products like *Current Contents* from the Institute for Scientific Information. The network CD-ROMs include

- ChemBank
- Computer Library, an index/abstract database of current microcomputer literature including the complete text of many of the articles
- Engineering Index, COMPENDEX
- Materials Safety Data Sheets (MSDS)
- National Technical Information Service (NTIS) database
- *Kirk-Othmer Encyclopedia of Chemical Technology*
- Pollution and Toxicology (POLTOX)
- WLN LaserCat Union Catalog.

The popularity of these CD-ROM databases has been such that we have been forced to limit widespread usage as the demand would overwhelm both the capacity of the network and the CDs themselves. A solution is currently being worked out as fiber optic cables are being installed around the site and file servers are being added.

In the main and branch libraries, standalone Pioneer multiplatter CD-ROM drives provide users with additional access to a variety of databases including MEDLINE, BIOSIS, ENVIROLINE, *Books-in-Print*, Ulrich's, ABI/INFORM (UMI ProQuest) and Water Resources Abstracts. Full text articles can be printed on demand from such systems as ProQuest, from University Microfilms, and ADONIS. There are also files with world weather data, world maps, and even city street maps. Electronic map services, by the way, have proved to be quite popular with a variety of users. What better way to travel to a meeting in a strange city, for instance, than to have a street map available ahead of time? Or what could be more convenient than to

have a map image on diskette so it could be included in a report that has been prepared on a word processor?

One side effect that must be faced when libraries offer a variety of individual CD-ROM databases, along with the usual bibliographic files downloaded from a DIALOG or STN source, is that the search results become even more fragmented and disorganized than when only a single source is used. To overcome this problem and to improve any downloaded bibliographic search, we have added a new software product called InLine. This software allows us to combine searches from multiple sources, CD-ROMs, disk-based files, and dial-up services into one file for the user. Duplicate entries for journal articles are either eliminated or flagged. Four different sort options can be selected, and the journal citations are automatically matched against our journal holdings so that the user can easily see what journal articles are available from the HTL and what will have to be ordered from other sources.

Short and Long-Range Plans

Current activities include the addition of other full-text files to the network service. Since the focus for much of the site activity is on environmental remediation, there is a great demand for regulatory and statutory information. We have tested and are adding such databases as the *Revised Code of Washington*, Title 40 of the *Code of Federal Regulations*, the *Federal Register*, and the Federal and DOE Acquisition Regulations (FAR-DEAR). We believe that there will be a growing demand for other or similar

materials as they become available in electronic formats.

Because the HTL is the repository for all pre-1965 Hanford research reports, we are currently conducting a project to scan and store, as digital page images on optical disk, the early reports for which the paper is deteriorating or the film is in poor condition. This system has also proved to be very efficient for scanning frequently requested documents. Previously, we photocopied this material to fill each request. Now we scan and store the report the first time it is requested. The report can then be quickly retrieved and printed or electronically faxed for each subsequent request. This project will help to position the library for the future, when a new wideband area network is in place. Under this scenario, we will be able to deliver the document image to a person's workstation upon request.

Combining the capabilities to scan and deliver full-page images of documents with digital fax services puts us in a great position to quickly deliver documents and to do so in a digital format. This technique has also been very effective in conjunction with the new Colorado Alliance for Research Libraries' (CARL) UnCover 2 journal article fax delivery service. With both our in-house and the CARL service, we are increasingly able to deliver requested documents to our users quickly at their nearest telefacsimile machine.

The use of CARL, the electronic interlibrary loan services from WLN, and those from other external sources also allow us, and any library, to provide users with ready access to multiple collections with the guarantee that they can have a

document very quickly and at modest cost.

Summary

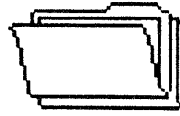
Like many other libraries during the past few years, we have been able to combine the availability of the many new CD-ROM and other electronic information products loaded locally with new and expanded dial-up services to provide fast access to a much wider range of information services than ever before. Based on these developments, one can now more readily imagine the extent to which electronic library services will be available at a user's desktop computer by the year 2000.

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